

WHAT IS CLAIMED IS:

1. A rotary electric machine comprising:
a commutator;
brushes sliding on a surface of the commutator; and
5 an armature,
wherein the surface of the commutator is rubbed by a
shakedown brush other than the brushes in advance.
2. The rotary electric machine according to Claim 1,
wherein a carbon coat is produced on the surface of
10 the commutator by rubbing the surface with the shakedown
brush.
3. The rotary electric machine according to Claim 1,
wherein a sliding width by the shakedown brush is
larger than a primary sliding width with the brushes.
- 15 4. The rotary electric machine according to Claim 2,
wherein a sliding width by the shakedown brush is
larger than a primary sliding width with the brushes.
5. The rotary electric machine according to Claim 1,
wherein a material of the shakedown brush is
20 different from that of the brushes.
6. The rotary electric machine according to Claim 2,
wherein a material of the shakedown brush is
different from that of the brushes.
7. The rotary electric machine according to Claim 3,
25 wherein a material of the shakedown brush is
different from that of the brushes.
8. The rotary electric machine according to Claim 4,

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17. A method of manufacturing a rotary electric machine

including a commutator, an armature having the commutator, and brushes sliding on a surface of the commutator comprising:

5 a step of rubbing the surface of the commutator by a shakedown brush other than the brushes in advance.

18. The method of manufacturing the rotary electric machine according to Claim 17,

wherein the step of rubbing is conducted before the brushes are assembled in the rotary electric machine.

10 19. The method of manufacturing the rotary electric machine according to Claim 17,

wherein the step of rubbing is conducted when the armature stands as a single unit before assembling into the rotary electric machine.

15 20. The method of manufacturing the rotary electric machine according to Claim 17,

wherein the step of rubbing is conducted without applying electricity to the shakedown brush.